

California Beverage Container Recycling Program History and Fund Management Options

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I. Executive Summary

In 1986, the California Beverage Container Recycling Program (Program) was established in order to provide Californians with a comprehensive and convenient beverage container recycling program and facilitate the development of California's recycling infrastructure. The Supplemental Report of the 2006 Budget Act included a request that the Department of Conservation (Department) submit a report on: (1) a history of revenues, expenditures, and balances in the Beverage Container Recycling Fund (Fund) and an estimate/projection of such information for FY 2006-07 and the subsequent two fiscal years; (2) a history of beverage container recycling rates and an estimate/projection of such rates for 2006 and the subsequent two calendar years; and (3) the costs and effectiveness of options to decrease the residual balance in the Fund. The request indicated that options should include those intended to increase the rate of recycling through targeted program augmentations, as well as options impacting the flow of revenues into the Fund. This report responds to the Budget Act direction and identifies strategies that would increase recycling rates as we invest in California's future recycling sustainability.

California's current Fund balance – estimated to be a little more than \$180 million at the end of FY 2006-07 – is the result of many years of revenues exceeding expenditures. This report provides the history of redemption and refund values, but the central reason for the existing Fund balance remains the difference between revenues and expenditures. While the amount of the balance may pose a tempting target for immediate and complete expenditure, the options envisioned in this report are intended to be flexible to allow continued Fund management without the need for drastic future reductions.

The options identified in this report are designed to effectively manage the Fund balance and encourage the growth of California's recycling rate. In discussing these options, the first component is a summary of the enactment of AB 3056 (Assembly Natural Resources Committee; Chapter 907, Statutes of 2006) during last year's legislative session. This bill made numerous changes to the Beverage Container Recycling and Litter Reduction Act (Act), many of which were suggested by the Department last year and were referred to by the Department during discussion surrounding the 2006 Budget Act. These changes will allow the Department to reduce the surplus through incentives to consumers, recyclers, processors, and manufacturers. The second component of the proposed options describes new initiatives that could achieve the goals established by the Budget Act request. The Department submits all of these options in the second component as strategies that would augment existing programs,

introduce new programs, and propose innovative cross-agency and inter-organizational partnerships in order to facilitate statewide resource conservation goals and objectives.

The implementation of the components and options cited above should move the recycling rate toward 80 percent, reduce the Fund balance, and serve as an overarching strategy that will ultimately best manage the Fund balance. These components and options, in order of their likelihood to increase beverage container recycling, will serve to facilitate new and innovative recycling programs and activities that will drive Californians to a renewed interest in recycling and litter abatement. This will all be accomplished while guaranteeing the protection of public health, safety, and the environment as we move California forward as an environmental leader and advocate of long-term recycling sustainability.

II. Introduction and Program Background

The Budget Act of 2006 mandated that the Department submit a report to the Legislature that includes: (1) a history of revenues, expenditures, and balances in the Fund and an estimate/projection of such information for FY 2006-07 and the subsequent two fiscal years; (2) a history of beverage container recycling rates, and an estimate/projection of such rates for 2006 and the subsequent two calendar years; and, (3) identification and assessment of options to decrease the residual balance in the Fund. Options evaluated in this report include those intended to increase the rate of recycling through targeted program augmentations, as well as options impacting the flow of revenues into or from the Fund.

Background

The Program was established by AB 2020 (Margolin; Chapter 624, Statutes of 1986) as a comprehensive effort to make beverage container recycling integral to the California economy, with a stated goal of an 80 percent recycling rate. The Program focuses on three fundamental concepts: (1) a deposit to give an incentive for recycling by consumers; (2) conveniently located recycling centers where consumers can recycle and collect the deposits; and, (3) the “polluter-pays” principle, embodied in a processing fee for materials whose cost to recycle exceeds their inherent scrap value. The Department certifies recyclers to redeem empty beverage containers, authorizes them to pay California Refund Value (CRV) to consumers, and to receive reimbursement from the Department for paid CRV, administrative costs, and processing costs. In addition, specified recyclers may be eligible to receive handling fees to reimburse them for the additional costs of providing convenient recycling opportunities adjacent to a supermarket. To encourage convenient recycling opportunities for consumers, a variety of recycling systems have been established.

The Department administers various grant incentive-based programs designed to encourage recycling and increase the recycling market and infrastructure throughout the state. Certified local Community Conservation Corps are eligible to receive grants for beverage container recycling and litter reduction activities. The Program allocates, by a statutorily specified formula, \$10.5 million annually to eligible cities and counties for beverage container recycling and litter abatement activities. The Recycling Market Development and Expansion grant program awards funds to build recycling infrastructure, to develop markets for recycled materials, and to support market expansion-related activities aimed at increasing the demand for, and recycling of, beverage containers, and creating more California jobs. The Department

also administers a Beverage Container Recycling competitive grant program that provides funding for those who provide convenient recycling programs to their local community. The Program also provides funding to support curbside collection of recyclables in residential neighborhoods. These payments help offset the costs of operating these programs to recycle materials and enhance waste diversion.

An important first step to reduce the Fund surplus and increase recycling took place during last year's legislative session. AB 3056 (Assembly Natural Resources Committee; Chapter 907, Statutes of 2006) was enacted to accomplish these objectives. This bill contains provisions that will stimulate recycling rates by providing consumers with an additional monetary incentive to increase recycling in California. This bill also creates marketplace incentives to increase the collection of quality materials for manufacturing and increase the demand for recyclable materials. Many of this bill's provisions may lead to an overall increase in recycling rates, which could allow the Department to reach the State's goal of 80 percent beverage container recycling. This report discusses in greater detail specific provisions of AB 3056 in a subsequent section.

III. The California Beverage Container Recycling Fund

At the center of the Program is the California Redemption Value. This redemption value is paid by beverage distributors on every beverage container sold or offered for sale in California. Beverage distributors make a redemption value payment into the Fund, and are reimbursed for this redemption value when they sell the beverages to retail markets. Retailers charge consumers a deposit, the California Redemption Value, at the point of purchase. Consumers are then eligible to return their empty beverage containers to a recycler, who returns the money as a Refund Value. The Program distinguishes the “refund value” from the “redemption value” – the refund value reflects the money paid out to recyclers and consumers, while redemption value refers to money that is paid into the Program. Over the history of the Program, the redemption value and the refund value have usually been equal, although this is not always the case. The redemption value and refund value has ranged from the initial one cent (\$0.01) per beverage container to its current four cents (\$0.04) for each beverage container of less than 24-ounce capacity, and eight cents (\$0.08) for each beverage container of 24-ounce or greater capacity. Based on the current recycling rate, both the refund and redemption values are expected to increase on July 1, 2007 to five cents (\$0.05) for each beverage container of less than 24-ounce capacity, and ten cents (\$0.10) for each beverage container of 24-ounce or greater capacity. This report later discusses changes to this schedule that were enacted in 2006 by AB 3056.

Because redemption payments are made for 100 percent of beverage containers sold in California, but refund values are only paid for the containers that are recycled in California (61 percent in 2005), surplus monies exist in the Fund. These surplus funds support all Program operating expenses and all authorized expenditures for handling fees, processing fee offsets, recycling grant programs, public education programs, and other authorized expenditures. For purposes of this report, the “surplus” is defined as the annual Program revenue less expenditures, when revenues exceed expenditures. Fund “balance,” however, describes the amount of money in the Fund, as a result of accumulated yearly surpluses or deficits, at the end of a given fiscal year.

Redemption Value and Refund Value History

The Department began collecting redemption payments from beverage distributors and disbursing refund values to recyclers in late 1987. The initial redemption payment and refund value at one cent (\$0.01) per container did not provide sufficient cash flow to cover Program operations. The Program was provided a loan from the General Fund in fiscal year FY 1986-87 to meet FY 1987-88 obligations.

In 1989, the Program changed to require payment of two cents (\$0.02) into the Fund for every beverage container sold, while the Fund was disbursing two cents (\$0.02) per individual beverage container recycled, and five cents (\$0.05) per pair of beverage containers recycled. In 1992, the redemption payment became \$0.025 and \$0.05, to match the effective refund value. In 2003, the Program was again modified to increase redemption payments and refund values to four cents (\$0.04) for each container less than 24 ounces, and eight cents (\$0.08) for containers with a capacity of 24 ounces or more. This change in law also created a trigger that specifies if the recycling rate for calendar year 2006, or any subsequent year, is not at least 75 percent, the redemption and refund values increase from four cents (\$0.04) and eight cents (\$0.08) (for containers below 24 ounces and 24 ounces and above, respectively) to five cents (\$0.05) and ten cents (\$0.10) on July 1 of the following year. It does not appear that California will attain this 75 percent recycling rate in 2006, and likely will trigger the increase to five cents (\$0.05) and ten cents (\$0.10) effective July 1, 2007.

Expenditures

Numerous revisions to the California Beverage Container Recycling and Litter Reduction Act (Act) have attempted to increase recycling rates to reach and maintain the Program's 80 percent goal by increasing expenditures from the Fund. Initially, the Legislature authorized expenditures from the Fund for:

- Payment of refund values and administrative fees.
- Program administration.

Authorized Expenditures CBCRF -- FY 2006/07 *	
	Dollars **
CRV paid to Consumers (estimated)	\$ 600,000
Administration	\$ 36,000
Quality Glass Incentive Payments	\$ 3,000
Infrastructure Loan Guarantee Program	\$ 10,000
Public Education & Outreach	\$ 5,000
Competitive Grants	\$ 1,500
Handling Fee Payments	\$ 26,500
Processing Fee Offset Payments	\$ 94,000
Payments to Local Governments	\$ 10,500
Payments to Local Conservation Corps	\$ 15,000
Market Development Grants	\$ 10,000
Supplemental Curbside Payments	\$ 15,000
Total	\$ 826,500
Governor's Budget expenditures	\$ 827,000
* - Figures do not include AB 3056 implementation	
** - Dollars in Thousands	

- Development of a prudent reserve.
- Recycling and litter abatement activities through grants to cities and counties and to certified local Community Conservation Corps.
- Convenience Incentive Payments to assist in establishing recycling locations in convenience zones lacking sufficient recycling locations.

From that basic framework, the Program has been expanded to include the following types of programs that seek to increase recycling:

- \$15 million for supplemental payments to curbside programs and neighborhood drop off programs.
- Up to \$26.5 million for Handling Fees paid to recycling centers located in Convenience Zones (created as a revision to the Convenience Incentive Payments).
- \$10 million for Market Development and Expansion Grants.
- \$5 million for public education and awareness.
- \$3 million for a program to improve the quality of recycled glass.

The Program has also been modified to authorize expenditures that reduce the cost of participating in the Program for manufacturers, distributors, recyclers, processors, and others. For instance, processing fees that at one time were paid entirely by beverage manufacturers can now be offset by more than 80 percent, or have even been temporarily suspended. Administrative fees for the cost of managing the reporting required of an entity charged with administering monies on behalf of the state (distributors, recyclers, and processors) have also increased over time. Today, for instance, distributors can withhold 1.5 percent of the amount they collect in redemption payments, recyclers can add .75 percent to the amount they claim as reimbursement for refund values paid to consumers, and processors can add 1.75 percent to the amount they claim as reimbursement for monies they advance the state to pay recyclers.

Recently enacted AB 3056 will add the following expenditures:

- Expand the authorized amount for Handling Fees paid to recycling centers located in Convenience Zones to \$31 million effective FY 2005-06, with increases of \$2 million each year, to \$35 million effective FY 2007-08. Beginning July 1, 2008, the cap will be removed altogether, and the handling fee will be based on an actual cost differential determined through survey methodology.

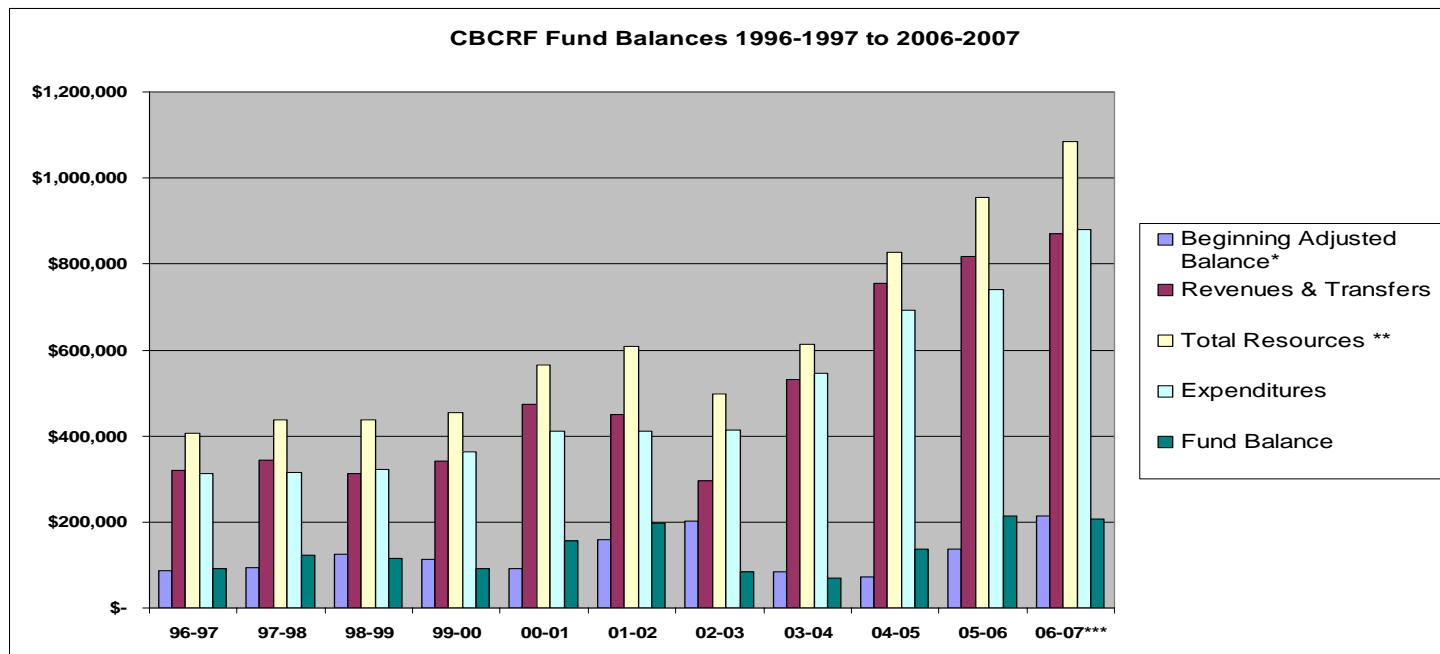
- Add a one-year recycling grant program of \$20 million to local Community Conservation Corps for FY 2007-08.
- Expand market development and expansion grants to \$20 million, and extend the grant program's sunset date to January 1, 2012.
- Amend the Quality Glass Incentive Payment program to become the Quality Incentive Payment program, which will include aluminum, plastic, and glass, and expand the authorized expenditure to \$15 million.
- Add a \$10 million per year Recycling Incentive Payment to recycling centers through calendar year 2009.
- Add a \$5 million per year program for a Plastic Market Development Payment program through calendar year 2011.
- Add a one-year grant program of \$5 million for the placement of source-separated recycling containers in low-income, multi-family dwellings.
- Add a one-time appropriation of \$5 million for placement of source-separated recycling containers in California State Parks.

These changes are also discussed later in this report relative to how they may increase recycling rates while reducing the Recycling Fund balance.

Fund Balance

The following table and chart reflects the total revenues into the Program, including adjustments and transfers, total Program expenditures, including adjustments and transfers, and Fund balances. This chart includes loans made to the General Fund from the Fund in the amounts of \$188 million in FY 2002-03 and \$98.3 million in FY 2003-04. These loans are due to be repaid to the Fund by June 30, 2013.

Fund Revenues, Expenditures, Balances											
	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	***06-07
Beginning Adjusted Balance*	\$86,719	\$93,254	\$125,842	\$113,935	\$91,633	\$159,009	\$201,060	\$83,538	\$73,008	\$135,988	\$213,979
Revenues & Transfers	\$319,432	\$345,015	\$312,056	\$340,980	\$473,944	\$449,422	\$296,443	\$530,678	\$755,414	\$818,711	\$871,340
Total Resources **	\$406,151	\$438,269	\$437,898	\$454,915	\$565,577	\$608,431	\$497,503	\$614,216	\$828,422	\$954,699	\$1,085,319
Expenditures	\$313,795	\$315,343	\$321,881	\$363,698	\$410,329	\$411,007	\$413,965	\$544,960	\$692,434	\$740,720	\$879,081
Fund Balance	\$92,356	\$122,926	\$116,017	\$91,217	\$155,248	\$197,424	\$83,538	\$69,256	\$135,988	\$213,979	\$206,238



* Dollars in Thousands

** Combination of Beginning Balance and Revenues

*** FY 2006-2007 - Projected

Between 1989 and 1992, the recycling rate rose from 56 percent (for all material types) to 82 percent. While the Fund maintained a balance of approximately \$5 million for FY 1988-89 and FY 1989-90, the balance was completely eliminated by FY 1991-92. This was a direct result of the redemption value for two containers being four cents and the refund value paid being five cents. Because more money was being paid out than paid in to the Program, loans totaling approximately \$43.3 million were required to maintain the Fund's solvency during the early 1990s.

In 1992, the redemption value and refund value were reconciled to the same amount, so the Program was not paying out more money than it was receiving per beverage container. Surplus monies began to accumulate on a yearly basis in the Fund. In 1999, SB 332 (Sher; Chapter 815, Statutes of 1999) added many new products to the Program (adding about 3.4 million more containers to the Program), with no corresponding increase in the recycling rate. Indeed, the rate was expected to decrease (and did) because the addition of new products and their containers to the recycling rate calculation happened quickly as an administrative matter, but the change in consumer behavior to recycle the containers for those newly-added products has not been as rapid. Many of the new products added to the program came in packaging that consumers were not historically aware could be recycled. The recycling rate of these newly added containers was marginal at best, contributing to a decrease in the overall recycling rate, and a corresponding increase in surplus funds from unredeemed deposits. Surplus funds accumulated at a higher rate than previously on a yearly basis. By FY 2002-03, the Fund had accumulated a total excess balance that approached \$200 million.

Current Fund forecasts indicate that the year-end Fund balance will decline to \$197 million at the end of FY 2006-07, and will continue to decline to \$182 million by the end of FY 2007-08. In FY 2007-08, revenue and expenditures are estimated to be at approximately \$1.1 billion each, with a slight decline in the overall Fund balance noted above due to increased expenditures from increased recycling and changes in authorized expenditure levels. Forecasts beyond FY 2007-08 are considered unreliable, and all future Fund balances will depend on recycling rates after June 2008. The general trend is that any year-end surplus will decrease as the recycling rate increases.

IV. The California Beverage Container Recycling Program Recycling Rate History

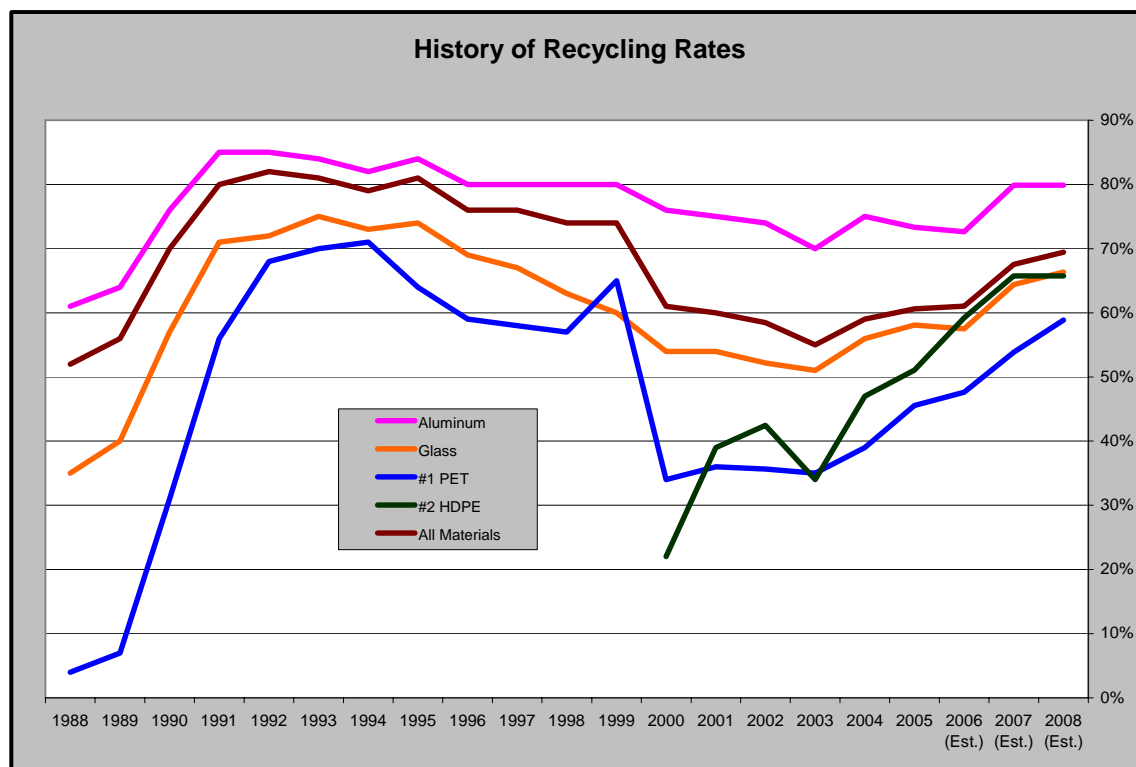
When SB 332 introduced new beverages into the program in 2000, California's recycling rates fell dramatically. As of June 2006, recycling rates are still below the 80 percent goal established by the Program's original enabling statute. With the enactment of AB 3056, however, the Department expects to see a notable improvement in the recycling rate.

The Department anticipates that the recycling rate will near 68 percent by 2007, and 69 percent by 2008. The primary assumptions used to estimate the increase in recycling for calendar years 2007 and 2008 is an observation by material type of the percent increase in returns, and the resulting increase in recycling rates, that occurred during the two calendar years following the last increase in refund value on January 1, 2004. The Department assumes a similar percent increase will occur during calendar years 2007 and 2008.

Data compiled from the Biannual Report of Beverage Container Sales, Returns, Redemption and Recycling Rates¹ is displayed in the table and chart, entitled ***History of Recycling Rates***, which tracks recycling rates for each material type on an annual basis. The chart includes estimated recycling rates for 2006 through 2008. It is important to note that the forecasting of recycling rates during a time in which the CRV paid out is increased requires broad assumptions, as provided above, so the resulting recycling rates should be considered with a level of caution.

¹ Department of Conservation, *Biannual Report of Beverage Container Sales, Returns, Redemption and Recycling Rates*, May 11, 2006

History of Recycling Rates					
Year	Aluminum	Glass	#1 PET	#2 HDPE	All Materials
2008 (Est.)	80%	66%	59%	66%	69%
2007 (Est.)	80%	64%	54%	66%	68%
2006 (Est.)	73%	58%	48%	59%	61%
2005	73%	58%	46%	51%	61%
2004	75%	56%	39%	47%	59%
2003	70%	51%	35%	34%	55%
2002	74%	52%	36%	42%	58%
2001	75%	54%	36%	39%	60%
2000	76%	54%	34%	22%	61%
1999	80%	60%	65%		74%
1998	80%	63%	57%		74%
1997	80%	67%	58%		76%
1996	80%	69%	59%		76%
1995	84%	74%	64%		81%
1994	82%	73%	71%		79%
1993	84%	75%	70%		81%
1992	85%	72%	68%		82%
1991	85%	71%	56%		80%
1990	76%	57%	31%		70%
1989	64%	40%	7%		56%
1988	61%	35%	4%		52%



V. Options to Increase Recycling Rate and Decrease Fund Balance – Changes Enacted by AB 3056

As described earlier, this report was requested during hearings on the FY 2006-07 Budget. Both the Senate and Assembly Budget Committees adopted language proposed by the Legislative Analyst calling for a report about methods to reduce Fund balances and increase recycling. The Department indicated during those hearings that a bill it was then sponsoring – AB 3056 (Committee on Natural Resources) – included provisions to both reduce the Fund balance and increase recycling rates.

AB 3056 was enacted. The Department continues to believe that provisions of this measure will reduce Fund balances and increase recycling rates. Specifically, the following provisions of that bill should have these effects:

Increased Pay-Out

Prior to the enactment of AB 3056, the Act contained provisions calling for a July 1, 2007, increase in the amount consumers pay as a deposit when they purchase beverages, and an increase in the amount they receive as refund when they recycle. AB 3056 accelerates to January 1, 2007, the date of the increase in pay-out to consumers when they recycle. As of that date, consumers will pay the \$.04/container (or \$.08/container over 24 ounces) as a deposit, but will receive back \$.05/container (or \$.10/container over 24 ounces) that they recycle.

The Department sponsored this change as a means to accelerate recycling rate increases. The Department also intended that this change would reduce the Fund balance in a way that rewarded consumers for recycling. It is difficult to project the impact of this change on the Fund balance because recycling rate increases during the first six months of 2007 would alter the impact. The Department believes the impact will be at least \$80 million.

Later sections of this report suggest a modification of this concept to allow the Department to periodically adjust the amount paid back to consumers and recyclers for recycling.

Market Development and Expansion Grant Program

Prior to the enactment of AB 3056, the Program's \$10 million annual Market Development and Expansion grant program was scheduled to sunset on January 1, 2007. AB 3056 provided an extension of the sunset of this grant program and an increase in the amount available as grants.

The Department sponsored this change to increase the recycling infrastructure in California. Market development grants help fund new manufacturing facilities that use recycled glass, plastic, and aluminum materials. These grants also help increase the quality of these recycled materials so that more of them can be used. The Department expects increased manufacturing capacity and/or higher quality of recycled materials will increase demand for recycled materials. Such increased demand will increase the scrap value of the materials and should help drive higher recycling rates. Continuation of the grant program and a doubling of its authorized expenditure level will also help reduce the Fund balance, with an ongoing expenditure of \$20 million annually.

Quality Incentive Payment Program

Prior to the enactment of AB 3056, the Program offered \$3 million per calendar year for "quality glass incentive payments." AB 3056 expanded this program to include plastic and aluminum materials and create a "Quality Incentive Payment" without regard to material type. AB 3056 also increased the amount available to \$15 million per calendar year. With this change, the Program contains an incentive for curbside programs, dropoff or collection programs, or processors who purchase curbside glass, plastic, and aluminum materials, to provide these materials in a cleaned and sorted form to meet the needs of manufacturers.

The Department sponsored this change to help increase the quality of recycled materials collected by systems that can implicitly degrade the quality of the recycled materials. High quality recycled materials allow facilities to save energy, and reduce costs and emissions, while preserving vital natural resources. The increased expenditure authority for this Quality Incentive Program both helps promote higher quality recycled materials, which should increase demand and scrap value for those materials, and will reduce the Fund balance through this added \$12 million a year expenditure.

AB 3056 created a related Market Development Payment for the washing and flaking or pelletizing of plastic in California so that it is available to California manufacturers. The total

amount available for this program is an additional \$5 million annually. This program should increase the quality of collected materials. It will also reduce the Fund balance.

Recycler Incentive Payment

Prior to the enactment of AB 3056, no incentive program existed specifically to encourage a recycler to increase his/her scope of business, outside profit motive. AB 3056 provides, until January 1, 2010, a Recycler Incentive Payment (RIP) to recyclers who demonstrate an increase of 6.5 percent in volumes collected from consumers in the first year of the RIP, and 5 percent in each year thereafter. Other conditions apply to ensure that the payments are accurate and that the total expenditure for RIP does not exceed \$10 million.

This program should create an additional incentive for recyclers to grow their businesses in the form of increased collections. Increased collections should result in increased recycling rates, provided the increase in collections is not the result of simply shifting materials among recycler types. Also, the increased \$10 million expenditure will reduce the Fund balance over the three-year life of the RIP.

Public Education and Information

Prior to AB 3056, the Department was authorized to expend up to \$5 million annually on public education and outreach to promote recycling. AB 3056 provides an additional \$5 million to conduct expanded outreach and promotion of recycling in a multimedia, multilingual form through January 1, 2008. This increased outreach is expected to increase recycling by informing the public about the changes in the amount of the California Redemption Value and Refund Value. The increased expenditure of \$5 million one-time will also reduce the Fund balance.

Local Community Conservation Corps Grants

Prior to AB 3056, California's 11 Local Community Conservation Corps (LCCCs) were eligible for a share of approximately \$18 million annually. A statutory base authorization of \$15 million, plus annual adjustments for inflation, determines this amount. AB 3056 provides for an additional, one-time authorization of up to \$20 million for LCCCs in the form of competitive grants. Grant applications will be for specified purposes intended to increase beverage container recycling and must be for one-time capital improvement projects and not ongoing staff support activities.

These grants should increase capacity in the state's recycling system. Further, this one-time \$20 million expenditure will reduce the Fund balance.

Other One-Time Programs

Two other one-time programs authorized by AB 3056 should help increase recycling and will reduce the Fund balance by \$10 million.

The bill authorizes the Department, in coordination with the California Department of Parks and Recreation, to expend \$5 million to install source-separated beverage container receptacles in the highest day-use State parks, and prioritize those parks as the first to receive these receptacles. This should create new recycling opportunities in areas that currently have none, thus increasing recycling.

AB 3056 also authorizes the Department to award up to \$5 million in grants on a one-time basis for placement of source-separated beverage container receptacles at low-income multifamily dwellings. Local governments or non-profit agencies may apply for these grants. This provision is intended to increase recycling opportunities at these locations, and, thus, increase recycling. Both of these one-time programs will also reduce the Fund balance.

VI. Options to Increase Recycling Rate and Decrease Fund Balance – Alternative Concepts

Options to Manage the Fund Balance Through Program Augmentation

The Department has identified the following options as mechanisms to increase recycling and reduce the Fund balance. To prioritize options that best serve the Department's goals and objectives, we have established the following criteria:

- Increases the Recycling Rate.
- Provides Consumer Convenience or Benefit.
- Offers Incentives to Facilitate Recycling.
- Pursues Sustainable Economic Strategies.

Ultimately, these options will create greater consumer incentives to recycle, expand California's recycling infrastructure, facilitate efforts to increase the beverage container recycling rate and reduce the Fund balance.

Recycling Program Evaluations and Metric Development

Beyond identifying options to increase recycling and/or reduce the Fund balance, the Department was also requested to evaluate the cost and effectiveness of these options. To fully accomplish this objective, the Department would need the ability to improve measurements and evaluations of the costs of each option. The Department would also need to have implemented the options to determine their effectiveness, let alone their *cost* effectiveness. In some cases, that data would be available, but in other options – or even in some existing programs – cost effectiveness cannot be determined without actually knowing costs.

The Department's primary accountability measurement for many programs is recycled material volume collected. A \$60,000 grant might result in several hundred tons of materials recycled by the grant recipient in a year. The same amount of grant funds might result in less than 100 tons of materials collected. Absent knowledge about the other resources or costs expended by those respective recipients to make that collection, the Department cannot identify the "cost effectiveness" of the grants. This is also the case with expenditures to recyclers. For some recycler types, the Department has a very good idea about costs because that data is collected for purposes of calculating a processing fee. For other recyclers such as curbsides or drop-off programs, the Department has no idea and no authority to collect data about the cost structure of the recycler.

Recycling program evaluations through metric development is the Department's first priority to more effectively manage the Fund balance. It is the only mechanism that would allow the Department to ensure that the greatest investment is being made to improve the effectiveness of California's recycling infrastructure.

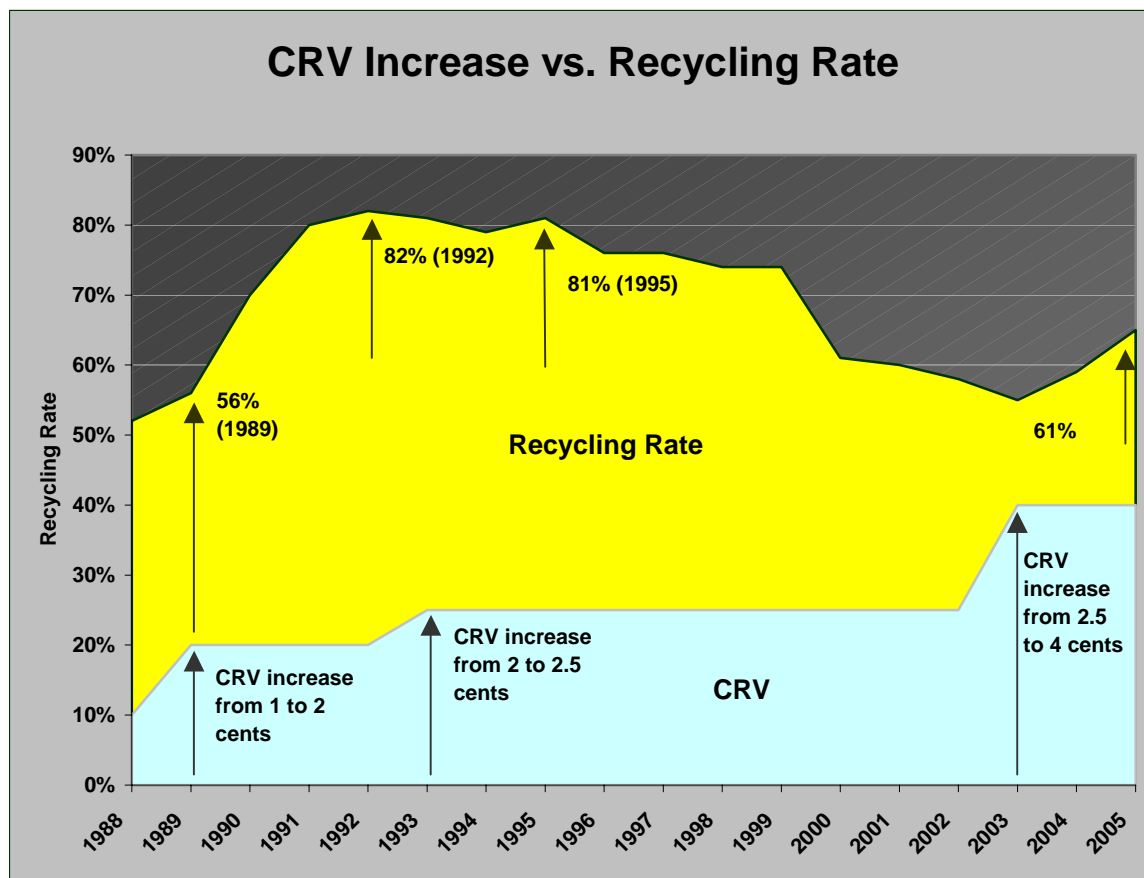
Program changes to improve the Department's ability to measure cost effectiveness of various programs will neither specifically "...decrease the residual balance in the Beverage Container Fund..." nor "...increase the rate of recycling through targeted program augmentations."

However, such changes will ensure that existing and future expenditures from the Fund can be appropriately compared for implementation, continuation, or augmentation.

The Department suggests that the following options have the potential to increase recycling and reduce the Fund balance. Each is a tool to manage expenditures, such as refund values to consumers and recyclers, marketing and advertising, education and awareness, and recycling infrastructure development. To varying degrees, though, the Department would need explicit authority to collect certain data to determine each option's costs and effectiveness, as that is the key to ensure program performance and accountability.

Option 1 –Increase California Refund Value

Provide the Department the explicit authority to adjust the CRV amount paid to consumers and recyclers. Historically, as illustrated in the chart below titled **CRV Increase vs. Recycling Rate**, the California Refund Value paid out for recycling increased in 1989, 1993, and again in 2004. Within two or three years of each increase, the recycling rate has consistently risen, then peaked.



Since the Program's inception, there has been a distinct relationship between increases in the amount paid out for recycling, and an increase in recycling activity across the state.

Researchers from the University of California, Berkeley also found this correlation in their findings. In their report, *California Beverage Container Recycling & Litter Reduction Study: a Report to the California Legislature*,² they state that the most effective way to increase the recycling of containers is to increase the amount paid to consumers.

² California Department of Conservation, California Beverage Container Recycling and Litter Reduction Study, April 13, 2003.

The amount paid out to consumers is a significant driver to increase recycling levels in California. This has been demonstrated with each increase in the amount paid out to consumers and recyclers, and will be a focus of measurement from January 1 through June 30, 2007, to understand the effectiveness in driving recycling of an amount paid out for recycling that is greater than the amount paid in by consumers at a store.

The option of granting the Department the explicit authority to adjust the refund value paid to consumers and recyclers would provide a strong strategic management tool to allow adjustments in the incentive provided to recycle, and would be consistent with the requirement that any means used to reduce the surplus should also address increases in recycling rates. The general concept of separately managing the amount paid for recycling was introduced in 1997. The report, *Conceptual Alternatives For A New California Beverage Container Redemption Program*,³ proposed a recycling dividend as a self-correcting mechanism to promote and maintain recycling. As proposed in the report, as recycling rates drop, the amount paid for recycling increases, encouraging more recycling and an increase in recycling rates.

Ultimately, this authority would give the Department the ability to provide greater incentives to recycle once a Fund balance surplus is determined. Providing the Department the explicit authority to adjust the refund value amount would allow the Fund balance to stabilize, and stimulate the overall beverage container recycling rate toward 80 percent in California.

³ NewPoint Group Management Consultants, "Conceptual Alternatives For A New California Beverage Container Redemption Program," April 21, 1997.

Option 2 – Proportional Funding of Recycling Infrastructure Development

Allow the Department to annually propose funding levels for specified programs, up to caps established as percentages of discretionary surplus in the Fund. Rather than fix the amount annually allocated to certain Program components, the Department envisions determining the amount available for those components based upon available funding. The amounts would have as caps a percentage of the “discretionary surplus,” as described below. Necessary ongoing costs would be paid, but other recycling components would fluctuate in amount, such that annual surpluses are not as likely to build and carry over as “Fund balance.” Those programs with flexible funding levels from this “discretionary surplus” would receive more monies to increase recycling when recycling rates are low (and the “discretionary surplus” is, therefore, higher).

The Fund annually takes in almost \$1 billion in redemption payments from consumers. The amount expended annually from the Fund for refund values for recycling must be considered the first and most important payment and has been approximately 60 percent of the \$1 billion. Other expenditures from the Fund need to be somewhat predictable for Program administration and for program participants. For instance, the Department’s annual oversight budget is generally about \$40 million. Other program participants rely on expenditures remaining relatively constant from year to year, given their business plans. These expenditures, and others like them, should remain established “fixed costs” as continuing appropriations, included in Public Resources Code section 14581. Programs identified as fixed costs should also include those programs where the actual programs’ cost are known and the amount of funding is directly related to the cost, for example Program administration, payment of refund values and processing payments, payment of Handling Fees (after July 1, 2008), and a prudent reserve.

However, other expenditures of the Fund may not need to be fixed. Grant programs, for instance, can be scaled up and down, depending upon available funds. The Department could determine a “discretionary surplus,” as the difference between annual revenues from consumers plus prior year balances and total fixed costs. Under this option, the Department and Legislature would identify components of the Program that should be fixed and those that could be scaled up and down as Fund balances allow. Examples of possible fixed costs are identified above; examples of “scalable cost” programs and potential percentages of discretionary surplus that could be allocated would include, but are not limited to:

- Competitive Grant Programs might receive up to 10 percent of the discretionary surplus to increase funding for local communities, nonprofit organizations, and businesses to increase recycling.
- Market Development Program might receive up to 10 percent of the discretionary surplus to increase funding for local processing facilities or attract new recycled content product manufacturers.
- City/County Payments might receive up to 10 percent of the discretionary surplus to increase funding for increased community outreach programs.

This option would be subject to annual appropriation in the Budget Act for those items that are deemed “scalable” and, thus, not continuously appropriated. The total appropriation, though, would be constrained by the relevant percentage attached to the scalable cost. While this may create some additional administrative burden, it would help ensure the largest amount of available monies in the Fund are used to promote increased recycling.

Option 3- Expand California's Community Recycling Opportunities

Provide the Department funding to expand California's community recycling collection infrastructure through competitive grant programs. The Department's primary program to increase the community recycling collection infrastructure is the Competitive Grant Program, which has an annual budget of \$1.5 million. Based on funding through grant agreements, this current funding mechanism provides the greatest and most effective measurement of beverage containers collected per dollar spent to ensure project performance and accountability. This is because the Department can compare actual expenditures to actual collection volumes, as well as against the applicants' proposed collection targets.

Increased funding for the Competitive Grant Program can provide greater opportunities to increase California's community recycling collection infrastructure and better serve the demand for recycling project funding. The need for such funds is illustrated in the table below titled, **Competitive Grant Applications/Awards (2000- 2006)**, which demonstrates the number of applications received and the funding requested in comparison with the available funding amount.

Competitive Grant Applications/Awards (2000- 2006)

Fiscal Year	Applications Received	Funding Requested	Grants Awarded	Funding Available
2000-2001	26	\$ 1.5 million	11	\$500,000
2001-2002	69	\$ 4.3 million	17	\$500,000
2002-2003	91	\$ 6.3 million	18	\$1 million
2003-2004	47	\$ 4.7 million	19	\$1 million
2004-2005	61	\$ 2.2 million	14	\$1.5 million
2005-2006	120	\$16.3 million	13	\$1.5 million
2006-2007	135	\$15.3 million	17	\$1.5 million

The Department believes that increasing the funding for this grant program by up to \$20 million, or by a set percentage of a discretionary surplus, as outlined in Option 2, will improve the collection infrastructure statewide, and, in turn, increase recycling rates. This \$20 million would only be awarded to grantees the Department determines meet a specific level of accountability and success.

Option 4- Increase Focused, Regional Community Recycling Programs

Provide the Department funding to increase focused, regional community recycling programs. In 2007, a component of the Department's strategy is to target communities for marketing and other recycling program activities. The Comprehensive Recycling Community (CRC) project will implement a marketing strategy and conduct subsequent analyses, in combination with infrastructure improvements in communities in and around the city of Monterey, to assist in beverage container collection and recycling programs. This project will use a market test to determine the effectiveness of specific marketing messages.

The CRC project team, in coordination with the Department's ongoing marketing campaign, will develop and implement infrastructure improvements, such as advanced-technology collection bins at high-profile, public locations and large venues. These improvements should result in an increase in beverage container recycling rates, and assist communities with the introduction of sustainable programs designed to maximize local recycling potential. Ultimately, this project's goal is to implement proven strategies or best practices that increase the recycling of beverage containers, and that are capable of being replicated in other communities throughout California.

One purpose of the CRC program is to determine what funding is required to have a measurable impact on the CRC project region. The project the Department initiates in 2007 will provide one data point to assess the staffing, marketing and advertising, and recycling infrastructure required to have a measurable regional impact. Under this proposed option, the Department suggests additional funding to increase focused, regional community recycling programs, and possible infrastructure investments to assist in container collection. Expanding this program will result in multiple data points, allowing the Department to more effectively estimate the type and amount of resources needed for further regional and statewide campaigns that increase recycling.

Option 5 - Increase Education and Awareness

Increase support for the Education and the Environment Initiative. Education and recycling awareness are an integral part of the Department's outreach strategy. Over time, however, it has become increasingly apparent that existing programs are very difficult to evaluate. There are over six million students in California's more than 1,000 school districts statewide,⁴ yet the Department is able to reach and interact with only 10 of these school districts per year under existing budgetary allocations.

Given the size of the current California student population, single-department programs may have limited impact. A more effective option may be for the Department to become a more active partner in the statewide Education and the Environment Initiative. The California Environmental Protection Agency and the California Integrated Waste Management Board are actively engaged in the implementation of the Education and the Environment Initiative pursuant to AB 1548 (Pavley; Chapter 665, Statutes of 2003) and AB 1721 (Pavley; Chapter 581, Statutes of 2005). These landmark laws mandate the development of a Unified Education Strategy to bring education about the environment into California's primary and secondary schools. Current Initiative partners include the Office of the Secretary for Education, the Curriculum and Supplemental Materials Commission, the State Board of Education, the State Department of Education, and the Resources Agency. Through the Initiative, students will be introduced to environmental issues, including recycling, through a new integrated curriculum. For example, math and science curricula could be modified to include recycling foundations in lessons, such as:

- Calculate the CRV received for 10 aluminum cans.
- Calculate the number of beverage containers necessary to pay for a class field trip to the local art museum.
- Measure the energy impact of recycling aluminum cans.

By providing ongoing support for the Education and the Environment Initiative, the Department will have a broader impact and help leverage other available state funds, while providing teacher support.

A second component of increasing awareness through education is the establishment of a recycling collection program for primary and secondary schools. Under this option, the Program

⁴ California Department of Education, Fingertip Facts on Education in California, <http://www.cde.ca.gov/re/pn/fb/yr04fingertipfacts.asp>

would include a statewide School Recycling Grant Program, funded at \$2 million per year, which would complement the education curriculum. As students are taught about recycling and its benefits, they would have the ability to physically implement what they are learning in the classroom. Schools would see a direct financial benefit, while the Department would see an increase in recycling.

Option 6 –Increase Support for Beverage Container Recycling Sustainability Programs

Provide the Department the explicit authority to expend funds on programs to increase the long-term sustainability of beverage container recycling. A primary intent of the Act is to create and maintain a marketplace where it is profitable to establish recycling centers and locations to provide consumers with convenient recycling opportunities. An extensive focus of this report is on options to increase recycling based on the current beverage container market that is dominated by aluminum, #1 PET plastic, and glass. Looking forward toward a sustainable recycling infrastructure, it is important that beverage packaging and distribution be reviewed to reduce total resources used, while continuing to serve the demand for conveniently packaged beverages. By reducing total resources used, the total resources available to be recycled are reduced, and recycling rates of existing material types will increase, assuming consistent recycling behavior by consumers. Focusing on long-term sustainability, this option suggests that the Department provide funds to assist beverage and packaging manufacturers in developing products that: (1) use fewer resources in packaging manufacturing and product distribution; (2) can be recycled without being subsidized; and (3) are not a contaminant to current or new recycling systems. This option may be developed through changes to the current market development and expansion grant program, or through a newly created beverage container recycling market sustainability program. This program would focus on the long-term impacts of new packaging technology, improved packaging, product distribution systems, and container design.

Providing the Department explicit authority to expend funds on programs to increase the long-term sustainability of beverage container recycling provides an avenue to use surplus funds today to create and maintain a sustainable marketplace in the future.

Option 7 – Enhance the Litter Component of the Recycling Program

Increase support for multi-agency litter reduction initiatives. Litter abatement was a key component in the establishment of the Program. The Department's recycling activities could be enhanced through new or strengthened relationships with agencies whose mission is to address the varied and broad issues of litter reduction. Of primary relevance to the Department are those potential solutions that reduce the number of California beverage containers found in litter.

Beverage container litter reduction is a significant positive result of the Program. The report, *California Litter: One Year After*,⁵ determined that one year after the implementation of the Program, beverage container litter was reduced by 42 percent below the rate measured in 1985. The same report found that the rate at which beverage containers accumulate in litter was reduced by 45 percent below a baseline sample. This success could be a model for other products similar to beverage containers that are present in the waste stream.

The California Coastal Commission, in partnership with the Algalita Marine Research Foundation, produced a report in 2005, entitled, '*Eliminating Land-Based Discharges of Marine Debris In California – A Plan of Action from the Plastic Debris Project*' (Action Plan).⁶ The Department finds most important those recommendations that focus on the correlation between the improper disposal of plastic beverage containers and those plastics found in California's waterways and offshore.

A prior option discussed expansion of the Comprehensive Recycling Community (CRC) to more areas to collect a wider array of data. Under this option, the CRC program would expand to partner with other state and local agencies, such as the Ocean Protection Council, to implement anti-litter efforts to reduce beverage container litter in oceans and in water courses that drain to the ocean. The Department envisions an increased dedication of resources to survey offshore and near-shore litter streams to identify the litter's beverage containers and other components. The Department expects that this option could result in more recycling and reduced litter in local communities in ways that can be replicated throughout the state. This may also stimulate discussion about how deposit programs can prevent non-beverage container litter or can fund the clean up of materials that are not presently recyclable.

⁵ California Department of Conservation, *California Litter: One Year After* (February 1989)

⁶ California Coastal Commission, *Eliminated Land-based Discharges of Marine Debris in California: A Plan of Action from The Plastic Debris Project* (June 2006)

Options to Manage the Fund Balance Through Revenue Reduction

Option 8 - Reduce The California Redemption Value (Pay-In)

Provide the Department explicit authority to adjust the CRV amount paid in by consumers. The Department includes this option as fulfilling a requirement of the Supplemental Report language. The Department has significant concerns that this option might deter recycling.

Since the inception of the Program, the CRV has increased periodically, and the increase in the CRV has correlated to an increase in the recycling rate. The first option illustrated in this report is to increase the refund value paid to consumers and recyclers when they recycle. In respect to managing the Fund balance, the option to reduce the amount paid in by consumers – the redemption payment – could reduce the Fund balance. Although this option would reduce the Fund surplus, it does not accomplish the purpose of increasing the recycling rate. It would be burdensome to program participants, especially beverage container retailers.

This option could create industry costs that may or may not be passed on to the consumer. Current law requires that retailers reflect the redemption value on the consumer receipt. Currently, retailers program their computer systems and cash registers to comply with this mandate. By reducing the amount paid in by consumers, retailers would incur the cost of re-programming computer systems and cash registers every time the redemption value changes. The retail industry statewide would sustain a cost each time the amount paid in by consumers is revised.

The Act requires that all beverage containers be labeled with the message, “California Refund Value,” or other similar messages. This required message and the receipt from the retailer is the primary communication to the consumer of the exact recycling value of the beverage container. If the amount paid in by a consumer is reduced, the message to the consumer provided via a retailer’s receipt is that the value of recycling the container is reduced. The history of the Program shows that increasing the CRV – the value of recycling – increases the recycling rate. If the message to the consumer via the amount of the redemption payment is that recycling is worth less, the expected result would be deterred recycling.

This option may also limit the recycling rate that can be achieved. The funds paid in by consumers are the primary source of revenue for the amount paid out to consumers and recyclers. In the review of the Fund, the estimated revenues and expenditures for FY 2007-08 are nearly equal at approximately \$1.1 billion. Any change in the revenue will reduce the potential to achieve a higher recycling rate without reducing other Program expenditures.

VII. Summary

The Department agrees with the Legislative Analyst's Office that changes to the Program should include those options that will ultimately lower the Fund balance and maintain balances at levels necessary to maintain a prudent reserve and Fund solvency. The Department concurs that it is inefficient for accumulated Fund balances to not be used to effect increased recycling. Focused review of the cost effectiveness of existing and proposed programs is necessary in order to determine how to best manage the Fund, reduce the Fund balance, and increase the state's recycling rate.

AB 3056 provided new and promising tools to increase recycling and manage the Fund balance. The additional options discussed in this report would enhance California's ability to attain or exceed an 80 percent recycling rate, while also supporting related efforts, such as increased education about the ease and importance of recycling and the need for improved litter reduction.